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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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11/08/1999

NEIL HARRIS

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5141

7590

09/07/2004

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EXAMINER

NI, SUHAN

ART UNIT

PAPER NUMBER

2643

17

DATE MAILED: 09/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/435,354

Applicant(s)

HARRIS ET AL.

Examiner

Suhan Ni

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-8 and 9-28 is/are rejected.
- 7) ☒ Claim(s) 6 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 08/707,012.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission for RCE filed on 06/14/2004 has been entered.
2. This communication is responsive to the applicant's response filed on 06/14/2004.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 7-8 and 10-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hathaway et al. (U. S. Pat. - 5,394,478) in view of Kawachi (U. S. Pat. - 4,811,406).

Regarding claim 1, Hathaway et al. disclose a loudspeaker (Fig. 5) comprising a diffused sound source (4); and a wave guide (2) coupled to the sound source to direct acoustic energy from the sound source, wherein the wave guide includes a section of substantially uniform cross-section extending from and beyond the vicinity of the sound source, and a termination positioned remotely from the sound source as claimed. But Hathaway et al. do not clearly teach a phase unrelated diffuse sound source as claimed. Since Kawachi discloses a speaker system comprising a phase unrelated diffuse sound source (Fig. 3), it therefore would have been obvious to one

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skilled in the art at the time the invention was made to provide the phase unrelated diffuse sound source taught by Kawachi for the loudspeaker as an alternate choice, in order to enrich the acoustic characteristics of the loudspeaker.

Regarding claims 2-4, Hathaway et al. further disclose the loudspeaker, wherein the sound source includes a bending wave mode panel radiator (6) and an actuator (7-9) applying bending wave to the panel radiator.

Regarding claims 5, 10, 18-19 and 22, neither Hathaway et al. nor Kawachi clearly teach a horn or folded duct as claimed. Since providing a horn or a folded duct for a waveguide is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to provide a suitable horn and/or a folded duct for the waveguide of the loudspeaker, in order to desirably deliver the sound generated by the loudspeaker.

Regarding claims 7, 14-17, 20 and 26-28, Hathaway et al. further disclose the loudspeaker, wherein an acoustic reflector (1) is coupled to the duct as claimed (Fig. 5).

Regarding claims 8, 12-13, 21 and 24-25, neither Hathaway et al. nor Kawachi clearly teach a plurality of terminations of the waveguide as claimed. Since partitioning a waveguide into more than one pathway or terminations is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to provide properly partitioning of the waveguide of the loudspeaker, in order to obtain certain acoustic characteristics.

Regarding claims 11 and 23, neither Hathaway et al. nor Kawachi clearly teach an attenuator as claimed. Since Provide a desirable attenuator for a loudspeaker is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention

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was made to provide a suitable attenuator, such as a grille for loudspeaker, in order to make the loudspeaker more durable.

Allowable Subject Matter

4. Claims 6 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Amendment

5. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

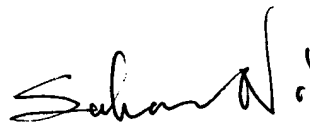
Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is (703)-308-9322, and the number for fax machine is (703)-305-9508. The examiner can normally be reached on Monday through Thursday from 9:00 am to 7:30 pm. If it is necessary, the examiner's supervisor, **Curtis Kuntz**, can be reached at (703) 305-4708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 305-3900.

SN

September 3, 2004


SUHAN NI
PRIMARY EXAMINER